



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,028	04/01/2004	Marcus Bocker	512425-2106	9331

7590 06/30/2006

FROMMER LAWRENCE & HAUG LLP  
745 Fifth Avenue  
New York, NY 10151

EXAMINER

METZMAIER, DANIEL S

ART UNIT PAPER NUMBER

1712

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/816,028

Applicant(s)

BOCKER ET AL.

Examiner

Daniel S. Metzmaier

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/01/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Claims 1-15 are pending.

#### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicants' claims define an aqueous defoamer emulsion. Applicants have not adequately described the full scope of the invention so the skilled artisan would be able to practice the invention.

Initially, applicants have not specifically defined the scope of "at least one active defoaming substance and , optionally, at least one auxiliary or additive" in claim 1. Applicants have not adequately set forth what are the defoamer emulsions that the compound of formula (I) is add in claim 11.

Applicants set forth (page 6, last paragraph) that the emulsions can be prepared from known methods and set forth five separate disclosures or refers to the references

Art Unit: 1712

cited in the references. Applicants do not set forth the scope of the defoamer emulsions and exemplify example 8 of DE-C-199 17 186 and example 5 of EP-B-0 658 361, both are in the German language. Said description is inadequate. Furthermore, Defoamer 3 of the examples is described as a commercial antifoam concentrate based on vegetable oils. It is unclear what are the emulsion components or how one skilled in the art would determine the scope of said components.

The further comparative test of said defoamers are unclear since it is unclear what are the commercial defoamers applicant employed in making the comparative test.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite since the temperature of the viscosity is undefined and the viscosity would be expected to vary with the temperature.

In claim 1, it is unclear what is intended by "optionally, at least one auxiliary or additive".

Claim 1 is indefinite as to the scope of the aqueous defoamer emulsion comprising an oil-in-water emulsion, which is set forth as "consisting of at least one organopolysiloxane compound having a viscosity of  $\geq$  about  $1 \cdot 10^6$  mPas and water". It is unclear that the "aqueous defoamer emulsion" and the "oil-in-water emulsion" can

Art Unit: 1712

exist as distinct emulsions. Therefore, it is unclear what is applicants' intent of the transitional language "consisting of", which defines component B).

Claims 3, 4 and 11 (independent claims) set forth  $R^2$  "has the definition of  $R^3$ ,  $R^4$ ,  $R^5$ ". It is unclear whether  $R^2$  must collectively be  $R^3$ ,  $R^4$ ,  $R^5$  or is  $R^2$  selected from the group consisting of  $R^3$ ,  $R^4$ , and  $R^5$ .

Claims 7-10 are indefinite since they lack antecedent basis for an "organopolysiloxane compound of formula (I)" and the substituents and/or subscripts defined therein.

In claim 11, "the defoamer emulsion" lacks proper antecedent basis.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5 and 7-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Dow Corning Toray Silicone Company, Ltd., EP 0 761 724 A2. Dow '724 (column 11, example 2) discloses emulsions of polydimethylsiloxane gum with a viscosity of 10,500,000 centistokes and a particle size of less than 0.4 microns. Dow '724 (column 8, lines 36 et seq) discloses organopolysiloxanes reading on those claimed, wherein  $R^2$  is  $R^5$ , which is  $R^1$  and  $a + b$  is about 2.

Art Unit: 1712

While the compositions are not characterized as aqueous defoamer emulsions, polydiorganosiloxanes are well known for defoaming efficacy. Said property would have been expected to have been inherent.

Dow '724 (example 2) discloses the addition of the polydimethylsiloxane emulsions to the emulsifier and isoparaffin, which reads on on at least one defoaming substance claimed. The emulsion formation disclosed reads on the adding of claim 11 since at least some of the oil would be dispersed upon emulsion formation. Dow '724 (column 6, lines 42-54) discloses concentrates.

Dow '724 (column 1, lines 8-11 and 52 et seq) disclose the polydimethylsiloxane emulsions are widely used in industry as lubricants, fiber treatment agents, cosmetic bases and paint additives. The preamble of claims 13, 14, and 15 do not distinguish the otherwise anticipated compositions. Furthermore, the polydimethylsiloxane is a dispersed polymer and paints would inherently contain polymers, e.g., latex paints.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

Art Unit: 1712

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dow Corning Toray Silicone Company, Ltd., EP 0 761 724 A2. Dow '724 discloses the claimed compositions and methods as set forth in the above anticipation rejection.

To the extent Dow '724 differs from claims 11 and 12 in the adding to a defoamer emulsion, the "selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results". See MPEP 2144.04(IV)(C). It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to add the polydimethylsiloxane to the remaining emulsion components, which would form at least a coarse emulsion and would improve in stability upon processing as disclosed in the Dow '724 reference.

11. Claims 1-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schulz, Jr. et al, US 5,811,487. Schulz, Jr. et al (abstract, examples and claims) discloses the formation of silicone elastomeric paste forming emulsions having a viscosity on the order of  $1.82 \cdot 10^6$  mPas,  $4.93 \cdot 10^6$  mPas, and  $2.7 \cdot 10^6$  mPas.

The organopolysiloxane emulsions would function as a defoamer emulsion since siloxanes and hydrophobic solids are well known to have foam inhibiting properties. Furthermore, Schulz, Jr. et al (column 9, lines 26 et seq) discloses the silicones are

Art Unit: 1712

useful as carriers in the organic phases of antifoams as well as paints and coatings. It is noted that silicones are dispersed polymers.

The particle size of the emulsions would have been inherent to form emulsion characterized as having excellent aesthetics and stability in the Schulz, Jr. et al reference.

To the extent the Schulz, Jr. et al reference differs from the claims in the specific or explicit disclosure of the addition of the elastomeric silicone to a defoamer emulsion having at least one defoaming substance, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the elastomeric silicones of Schulz, Jr. et al as a carrier in the organic phase of known defoamer emulsions for the advantage of more effectively carrying the organic phase of the defoamer. The incorporation in a defoamer emulsions is a conventional form of commercial defoamers as noted by applicants and clearly contemplated in the Schulz, Jr. et al references.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is noted, EP 0 761 724 A, EP 0 285 391 A, DE 197 31 615 A (GB 2 315 757 A), patent Abstract JP 11 148012, and EP 0 442 098 A (US 5,302,657) were cited in the corresponding European Search Report to EP 1 464 371 A (Priority document DE 103 15 158, filed April 3, 2003, same as instant) as X references and are deemed pertinent to the instant disclosure. It is presumed applicants have said references and they are not being provided.

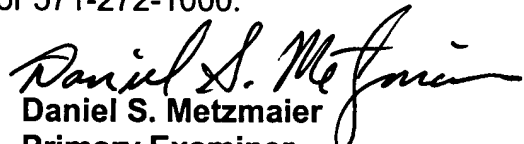


Art Unit: 1712

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Daniel S. Metzmaier  
Primary Examiner  
Art Unit 1712

DSM